

# **Manay Patel - S2AND on Patent Data README**

**Fall 2021**

## **Setting Up Directories:**

Move all the files and directories into the main folder for patent data (say patentsview/).  
patentsview/ must contain the patent\_paper.json file and folders corresponding to training and testing files  
For example, patentsview/ could look like this:

patentsview/:

```
-patent_paper.json
-common_charac/:   [FOR TRAINING]
    -patent_signatures.json
    -patent_clusters.json
    -patent_specter.pickle
-als_common/:      [FOR TESTING]
    -patent_signatures.json
    -patent_clusters.json
```

## **Brief Summary of Running S2AND Model:**

The model consists primarily of three class objects:

- ANDData class: This is the main class that reads and processes all of the datasets.
- PairwiseModeler class: This class builds upon ANDData object and creates an object which does pairwise functions.
- Clusterer class: This class builds upon ANDData object and creates an object which does clustering functions.

To save any of these objects, AllenAi shows a way to save the object in a pickle file which can be opened to perform any of the object's functions.

## **Modifications made to S2AND Model:**

There are two additional modes added to S2AND: "only\_train\_val\_split" and "only\_test" which are specified while creating the ANDData object for train and test datasets respectively.

These modes ensure that the data set is not unnecessarily split into more than necessary splits.

## **Example run files:**

To run all training and testing under one dataset, check the train\_test\_together.py script.

To run training and testing under different datasets, check the run\_train\_test\_separate.py script.

To see how to make predictions using S2AND, check the testPredict.py script.